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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>TRANSMITTAL LETTER TO THE UNITED STATES<br/>DESIGNATED/ELECTED OFFICE (DO/EO/US)<br/>CONCERNING A SUBMISSION UNDER 35 U.S.C. 371</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                             | ATTORNEY'S DOCKET NUMBER<br>13156-00063-US<br>U.S. APPLICATION NO. (if known, see 37 CFR 1.5)<br><b>10/585703</b> |
| INTERNATIONAL APPLICATION NO.<br>PCT/EP2005/000047                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | INTERNATIONAL FILING DATE<br>5 January 2005 | PRIORITY DATE CLAIMED<br>13 January 2004                                                                          |
| TITLE OF INVENTION: COMPOSITE MEMBRANE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                             |                                                                                                                   |
| APPLICANT(S) FOR DO/EO/US: Stefan Bitterlich et al.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                             |                                                                                                                   |
| Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                             |                                                                                                                   |
| 1. <input checked="" type="checkbox"/> This is a <b>FIRST</b> submission of items concerning a submission under 35 U.S.C. 371.<br>2. <input type="checkbox"/> This is a <b>SECOND</b> or <b>SUBSEQUENT</b> submission of items concerning a submission under 35 U.S.C. 371.<br>3. <input checked="" type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.<br>4. <input checked="" type="checkbox"/> The US has been elected (Article 31).<br>5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371 (c)(2))<br>a. <input checked="" type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau).<br>b. <input type="checkbox"/> has been communicated by the International Bureau.<br>c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).<br>6. <input checked="" type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).<br>a. <input checked="" type="checkbox"/> is attached hereto.<br>b. <input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4).<br>7. <input type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))<br>a. <input type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau).<br>b. <input type="checkbox"/> have been communicated by the International Bureau.<br>c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.<br>d. <input type="checkbox"/> have not been made and will not be made.<br>8. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).<br>9. <input checked="" type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).<br>10. <input type="checkbox"/> An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).<br><b>Items 11 to 20 below concern document(s) or information included:</b><br>11. <input checked="" type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98.<br>12. <input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.<br>13. <input checked="" type="checkbox"/> A preliminary amendment.<br>14. <input checked="" type="checkbox"/> An Application Data Sheet under 37 CFR 1.76.<br>15. <input type="checkbox"/> A substitute specification.<br>16. <input checked="" type="checkbox"/> A power of attorney and/or change of address letter.<br>17. <input type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 CFR 1.821 – 1.825.<br>18. <input type="checkbox"/> A second copy of the published International Application under 35 U.S.C. 154(d)(4).<br>19. <input type="checkbox"/> A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4). |                                             |                                                                                                                   |

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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |                                                                               |            |                                            |              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------------------------------------------------------------------------|------------|--------------------------------------------|--------------|
| U.S. APPLICATION NO. <b>10/385703</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              | INTERNATIONAL APPLICATION NO.<br>PCT/EP2005/000047                            |            | ATTORNEY'S DOCKET NUMBER<br>13156-00063-US |              |
| 20. <input checked="" type="checkbox"/> Other items or information: Form PCT/IB304, Form PCT/IB/308 (1st & 2nd Supplemental Notice, 2 pages total), Form PCT/IB/332, Form PCT/IPEA/402, Form PCT/IPEA/416 with Form PCT/IPEA/409 attached, Postcard, Certificate of Express Mail                                                                                                                                                                                                                                                                                                                                 |              |                                                                               |            |                                            |              |
| The following fees have been submitted                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |              |                                                                               |            | CALCULATIONS                               | PTO USE ONLY |
| 21. <input checked="" type="checkbox"/> Basic national fee (37 CFR 1.492(a)) ..... \$300                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |                                                                               |            | \$ 300.00                                  |              |
| 22. <input checked="" type="checkbox"/> Examination fee (37 CFR 1.492(c))<br>If the written opinion prepared by ISA/US or the international preliminary examination report prepared by IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)-(4) ..... \$0<br>All other situations ..... \$200                                                                                                                                                                                                                                                                                                    |              |                                                                               |            | \$ 200.00                                  |              |
| 23. <input checked="" type="checkbox"/> Search fee (37 CFR 1.492(b))<br>If the written opinion of the ISA/US or the international preliminary examination report prepared by IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)-(4) ..... \$0<br>Search fee (37 CFR 1.445(a)(2)) has been paid on the international application to the USPTO as an International Searching Authority ..... \$100<br>International Search Report prepared by an ISA other than the US and provided to the Office or previously communicated to the US by the IB ..... \$400<br>All other situations ..... \$500 |              |                                                                               |            | \$ 400.00                                  |              |
| TOTAL OF 21, 22 and 23 =                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |                                                                               |            | \$ 900.00                                  |              |
| <input type="checkbox"/> Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing in compliance with 37 CFR 1.821(c) or (e) or computer program listing in an electronic medium) (37 CFR 1.492(j)).<br>The fee is \$250 for each additional 50 sheets of paper or fraction thereof.                                                                                                                                                                                                                                                                              |              |                                                                               |            |                                            |              |
| Total Sheets                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Extra Sheets | Number of each additional 50 or fraction thereof (round up to a whole number) | RATE       |                                            |              |
| 19 - 100 =                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | /50 =        |                                                                               | x \$250.00 | \$                                         |              |
| Surcharge of \$130 for furnishing any of the search fee, examination fee, or the oath or declaration after the date of commencement of the national stage (37 CFR 1.492(h)).                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |                                                                               |            | \$                                         |              |
| CLAIMS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | NUMBER FILED | NUMBER EXTRA                                                                  | RATE       |                                            |              |
| Total claims                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 14 - 20 =    | x                                                                             |            | 0.00                                       |              |
| Independent claims                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 2 - 3 =      | x                                                                             |            | 0.00                                       |              |
| MULTIPLE DEPENDENT CLAIM(S) (if applicable)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |                                                                               | +          |                                            |              |
| TOTAL OF ABOVE CALCULATIONS =                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |                                                                               |            | \$ 900.00                                  |              |
| <input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. Fees above are reduced by 1/2.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |              |                                                                               |            |                                            |              |
| SUBTOTAL =                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |                                                                               |            | \$ 900.00                                  |              |
| Processing fee of \$130.00 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492(i)).                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                                                                               |            | \$                                         |              |
| TOTAL NATIONAL FEE =                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |              |                                                                               |            | \$ 900.00                                  |              |
| Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property +                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |                                                                               |            | \$                                         |              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |                                                                               |            | \$                                         |              |
| TOTAL FEES ENCLOSED =                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |                                                                               |            | \$ 900.00                                  |              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |                                                                               |            | Amount to be refunded:                     | \$           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |                                                                               |            | Amount to be charged                       | \$           |

10/585703  
IAP6 Rec'd PCT/PTO 11 JUL 2006

PTO-1390 (Rev. 07-2005)

Approved for use through 03/31/2007. OMB 0651-0021

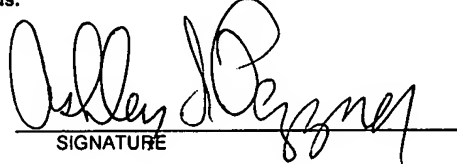
U. S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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- a. ☐ A check in the amount of \$ \_\_\_\_\_ to cover the above fees is enclosed.
- b. ☒ Please charge my Deposit Account No. 03-2775 in the amount of \$ 900.00 to cover the above fees.  
A duplicate copy of this sheet is enclosed.
- c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit  
Account No. 03-2775. A duplicate copy of this sheet is enclosed.
- d. ☐ Fees are to be charged to a credit card. **WARNING:** Information on this form may become public. Credit card information  
should not be included on this form. Provide credit card information and authorization on PTO-2038

**NOTE:** Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be  
filed and granted to restore the International Application to pending status.

SEND ALL CORRESPONDENCE TO:

  
SIGNATURE

Ashley I. Pezzner  
NAME

CUSTOMER NUMBER: 23416

35,646  
REGISTRATION NUMBER

Application No. (if known): Not Yet Assigned

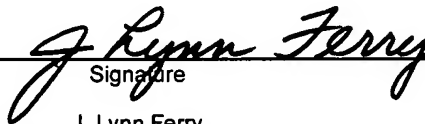
Attorney Docket No.: 13156-00063-US

## Certificate of Express Mailing Under 37 CFR 1.10

I hereby certify that this correspondence is being deposited with the United States Postal Service as Express Mail, Airbill No. EV686923519US in an envelope addressed to:

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P.O. Box 1450  
Alexandria, VA 22313-1450

on July 11, 2006  
Date

  
Signature

J. Lynn Ferry

Typed or printed name of person signing Certificate

Registration Number, if applicable

Telephone Number

Note: Each paper must have its own certificate of mailing, or this certificate must identify each submitted paper.

Transmittal Letter to the United States Designated-Elected Office  
Fee Transmittal  
Application Data Sheet  
Copy of the International application with search report attached  
Form PCT/IB304  
Form PCT/IB/308 (1st & 2nd Supplemental Notice, 2 pages total)  
Form PCT/IB/332  
Form PCT/IPEA/402  
Form PCT/IPEA/416 with Form PCT/IPEA/409 attached  
English language translation of the International application  
Executed Combined Declaration and Power of Attorney  
Preliminary Amendment  
Information Disclosure Statement, SB08, with references  
Postcard  
Authorization to charge \$900.00 to deposit account 03-2775

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|                                                                                                                                                                                                                   |      |                                 |                         |                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|---------------------------------|-------------------------|----------------|
| <p>Effective on 12/08/2004.<br/>Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).</p> <h2 style="text-align: center;">FEE TRANSMITTAL</h2> <h3 style="text-align: center;">For FY 2005</h3> |      | <p><b>Complete if Known</b></p> |                         |                |
| <input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27                                                                                                                                    |      | Application Number              | Not Yet Assigned 585703 |                |
|                                                                                                                                                                                                                   |      | Filing Date                     | Concurrently Herewith   |                |
|                                                                                                                                                                                                                   |      | First Named Inventor            | Stefan Bitterlich       |                |
|                                                                                                                                                                                                                   |      | Examiner Name                   | Not Yet Assigned        |                |
|                                                                                                                                                                                                                   |      | Art Unit                        | N/A                     |                |
| TOTAL AMOUNT OF PAYMENT                                                                                                                                                                                           | (\$) | 900.00                          | Attorney Docket No.     | 13156-00063-US |

**METHOD OF PAYMENT** (check all that apply)

☐ Check    ☐ Credit Card    ☐ Money Order    ☐ None    ☐ Other (please identify): \_\_\_\_\_

☒ Deposit Account    Deposit Account Number: 03-2775    Deposit Account Name: Connolly Bove Lodge & Hutz LLP

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☒ Charge fee(s) indicated below    ☐ Charge fee(s) indicated below, except for the filing fee

☒ Charge any additional fee(s) or underpayment of fee(s) under 37 CFR 1.16 and 1.17    ☒ Credit any overpayments

**FEE CALCULATION**

**1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

| Application Type | FILING FEES |                       | SEARCH FEES |                       | EXAMINATION FEES |                       | Fees Paid (\$) |
|------------------|-------------|-----------------------|-------------|-----------------------|------------------|-----------------------|----------------|
|                  | Fee (\$)    | Small Entity Fee (\$) | Fee (\$)    | Small Entity Fee (\$) | Fee (\$)         | Small Entity Fee (\$) |                |
| Utility          | 300         | 150                   | 500         | 250                   | 200              | 100                   | 900.00         |
| Design           | 200         | 100                   | 100         | 50                    | 130              | 65                    |                |
| Plant            | 200         | 100                   | 300         | 150                   | 160              | 80                    |                |
| Reissue          | 300         | 150                   | 500         | 250                   | 600              | 300                   |                |
| Provisional      | 200         | 100                   | 0           | 0                     | 0                | 0                     |                |

**2. EXCESS CLAIM FEES**

| Fee Description                                    | Fee (\$) | Small Entity Fee (\$) |
|----------------------------------------------------|----------|-----------------------|
| Each claim over 20 (including Reissues)            | 50       | 25                    |
| Each independent claim over 3 (including Reissues) | 200      | 100                   |
| Multiple dependent claims                          | 360      | 180                   |

| Total Claims  | Extra Claims | Fee (\$) | Fee Paid (\$) | Multiple Dependent Claims |               |
|---------------|--------------|----------|---------------|---------------------------|---------------|
|               |              |          |               | Fee (\$)                  | Fee Paid (\$) |
| 14            | - 20 =       | x        | =             |                           |               |
| Indep. Claims | Extra Claims | Fee (\$) | Fee Paid (\$) |                           |               |
| 2             | - 3 =        | x        | =             |                           |               |

**3. APPLICATION SIZE FEE**

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

| Total Sheets | Extra Sheets | Number of each additional 50 or fraction thereof | Fee (\$) | Fee Paid (\$) |
|--------------|--------------|--------------------------------------------------|----------|---------------|
| 19           | - 100 =      | /50 (round up to a whole number) x               |          |               |

**4. OTHER FEE(S)**

|                                                                 | Fees Paid (\$) |
|-----------------------------------------------------------------|----------------|
| Non-English Specification, \$130 fee (no small entity discount) |                |
| Other (e.g., late filing surcharge):                            |                |
| 1631 Basic National Stage fee                                   | 300.00         |
| 1633 National Stage Examination Fee - all other ...             | 200.00         |
| 1642 National Stage Search Fee - search report ...              | 400.00         |

|                   |                          |                                   |                |
|-------------------|--------------------------|-----------------------------------|----------------|
| SUBMITTED BY      |                          |                                   |                |
| Signature         | <i>Ashley I. Pezzner</i> | Registration No. (Attorney/Agent) | 35,646         |
| Name (Print/Type) | Ashley I. Pezzner        | Telephone                         | (302) 658-9141 |
|                   |                          | Date                              | 7/10/06        |